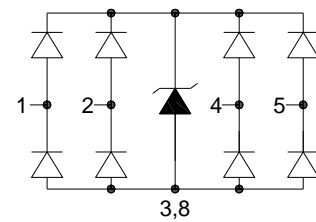
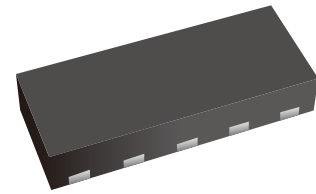


Features

- IEC 61000-4-2 Level 4 ESD Protection
 - ±20kV Contact Discharge
 - ±20kV Air Discharge
- 52W Peak pulse Power (8/20μs)
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Protecting four Uni-directional lines
- Capacitance: 0.5pF Typ.
- Lead free in comply with EU RoHS 2011/65/EU directives



Applications

- MP3 Players
- Battery Protection
- Vbat pin for Mobile Device
- Mobile Phones
- Power Line Protection
- Hand Held portable Applications

Ordering Information

Part Number	Marking	Shipping	Reel
LTE25NP05A01LD-TR3	.0524P	3000PCS Tape&Reel	7 inches

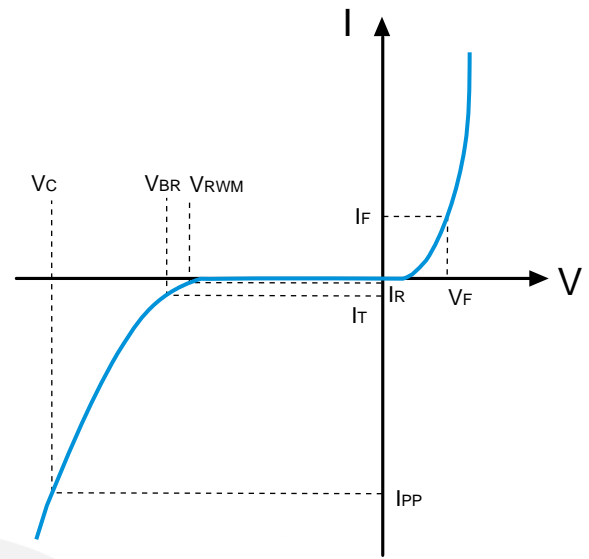
Absolute Maximum Rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min	Max	Unit
Peak pulse power (tp=8/20us)	P _{pk}	-	52	W
Peak pulse current (tp=8/20us)	I _{pp}		4	A
ESD (IEC61000-4-2 air discharge)	V _{ESD}	-	±20	kV
ESD (IEC61000-4-2 contact discharge)	V _{ESD}	-	±20	kV
Junction temperature	T _J	-	125	°C
Operating temperature	T _{OP}	-40	85	°C
Storage temperature	T _{STG}	-55	150	°C
Lead temperature	T _L	-	260	°C



Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

At $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	5.5			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			0.1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}; t_p=8/20\mu\text{s}$		8.5	10	V
		$I_{PP}=4\text{A}; t_p=8/20\mu\text{s}$		11	13	V
Junction Capacitance	C_J	$V_R=0\text{V}; f=1\text{MHz}, I/O\text{-GND}$		0.5	0.65	pF
		$V_R=0\text{V}; f=1\text{MHz}, I/O\text{-I/O}$		0.25	0.35	pF



Characteristics Curves

Fig.1 8/20 μ s waveform per IEC61000-4-5

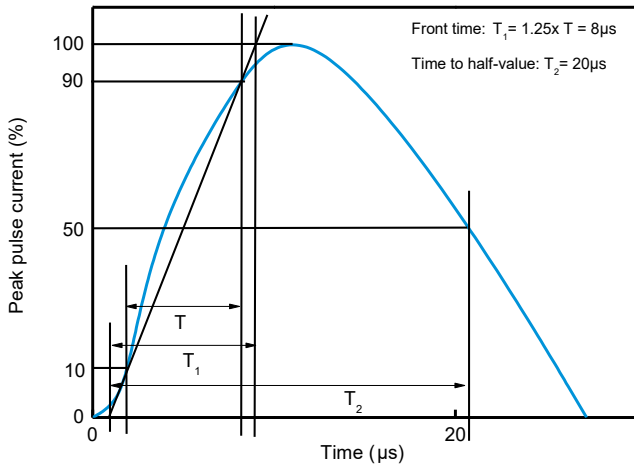


Fig.2 Contact discharge current waveform per IEC61000-4-2

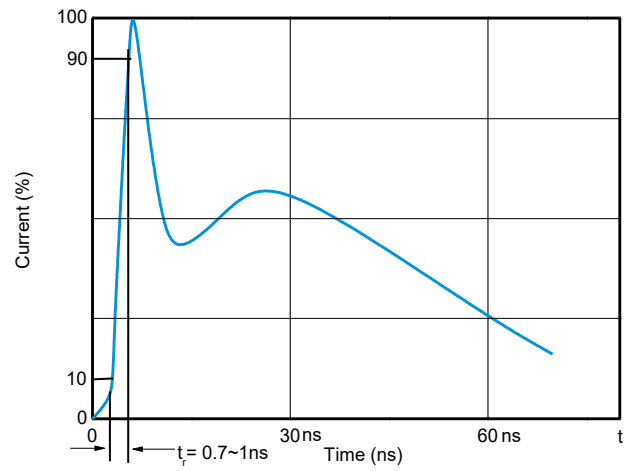


Fig.3 Clamping voltage vs Peak pulse current

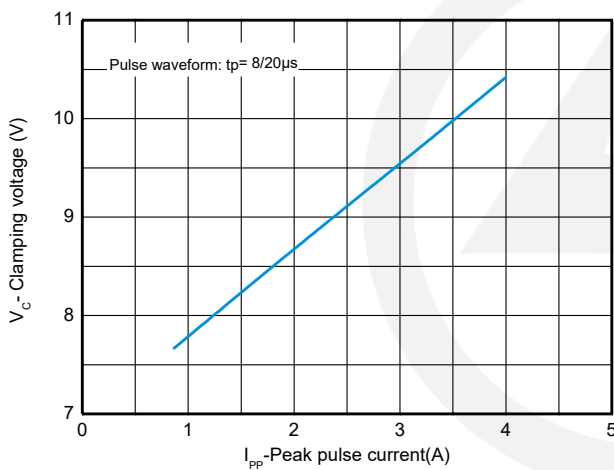


Fig.4 Capacitance vs Reverse voltage

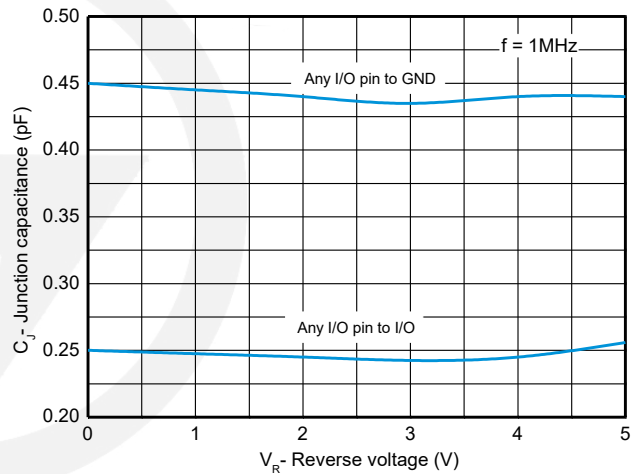


Fig.5 Non-repetitive peak pulse power vs Pulse time

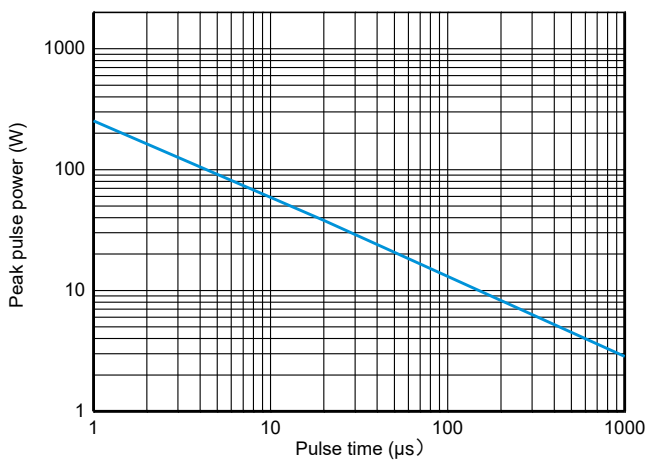
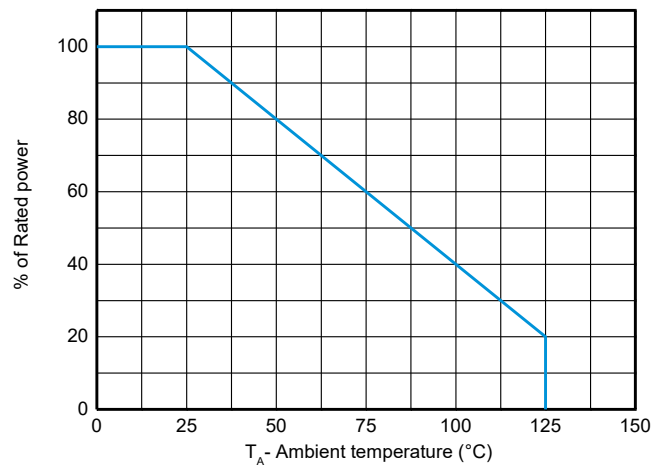


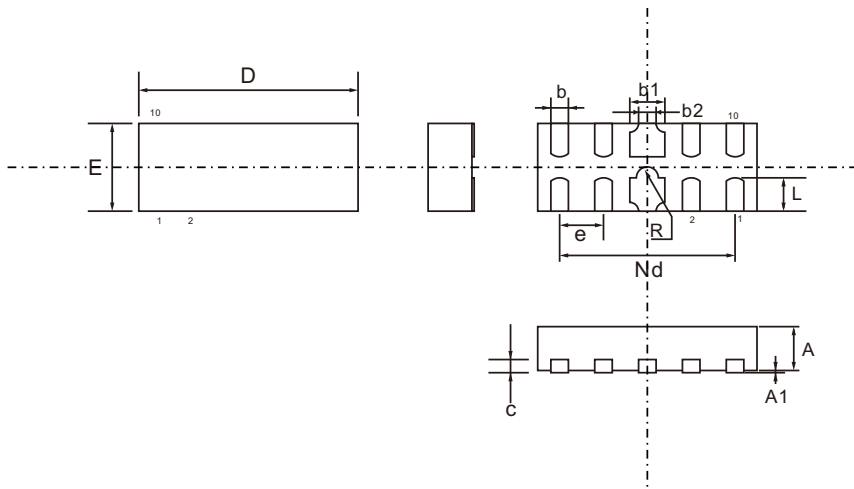
Fig.6 Power derating vs Ambient temperature





DFN2510 Package Outline

Unit: mm

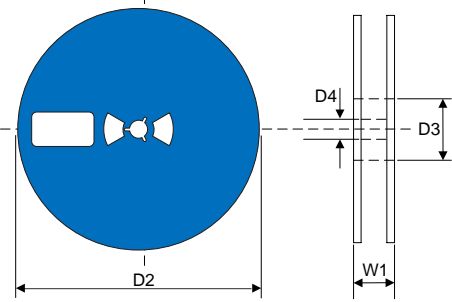


SYMBOL	DIMENSIONS	
	MIN.	MAX.
D	2.450	2.550
E	0.950	1.050
b1	0.350	0.450
b2	0.200 REF.	
b	0.150	0.250
L	0.330	0.430
Nd	2.000 BSC.	
e	0.500 BSC.	
R	0.100	0.150
A	0.450	0.550
c	0.150 REF.	
A1	0.000	0.050

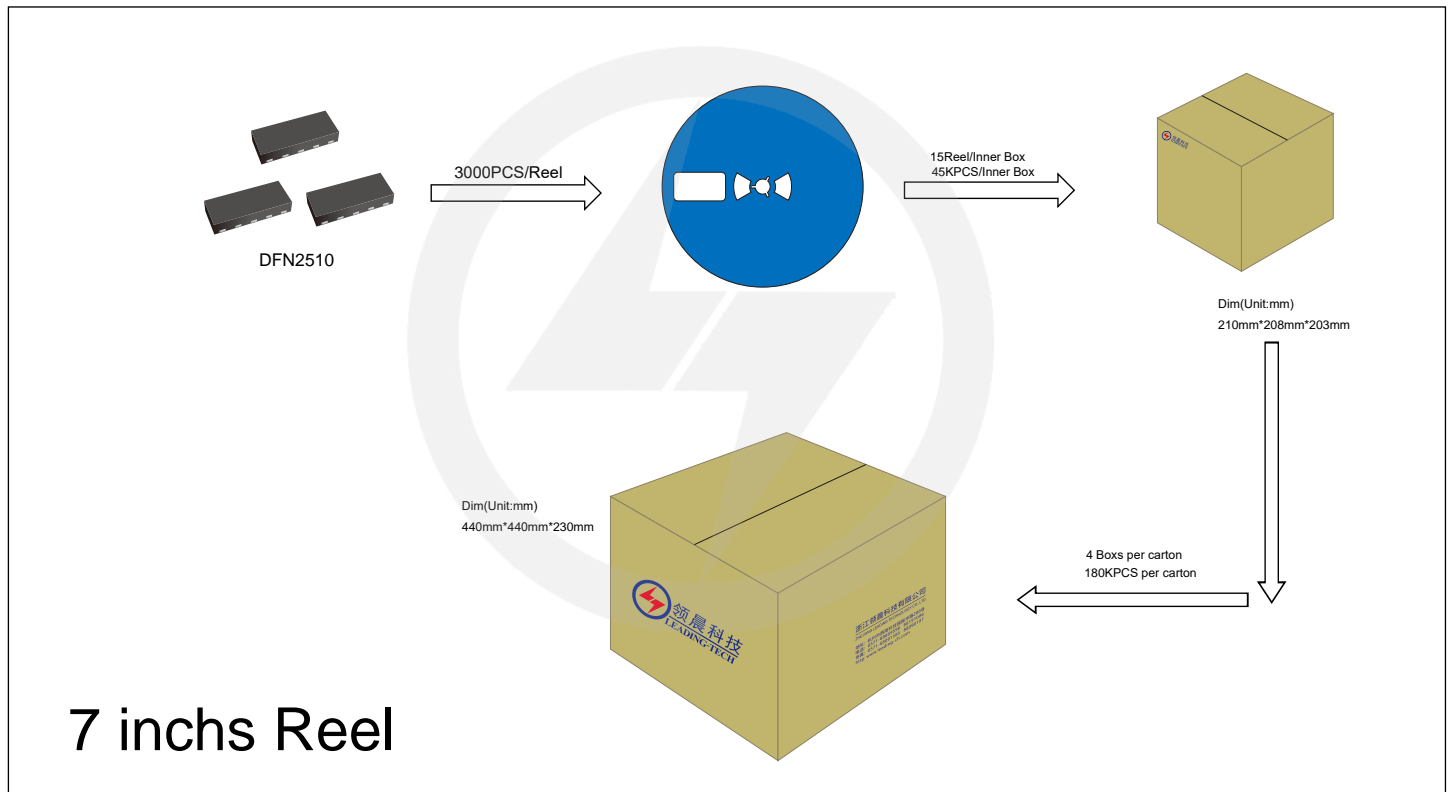


Reel Dimensions

Unit : mm

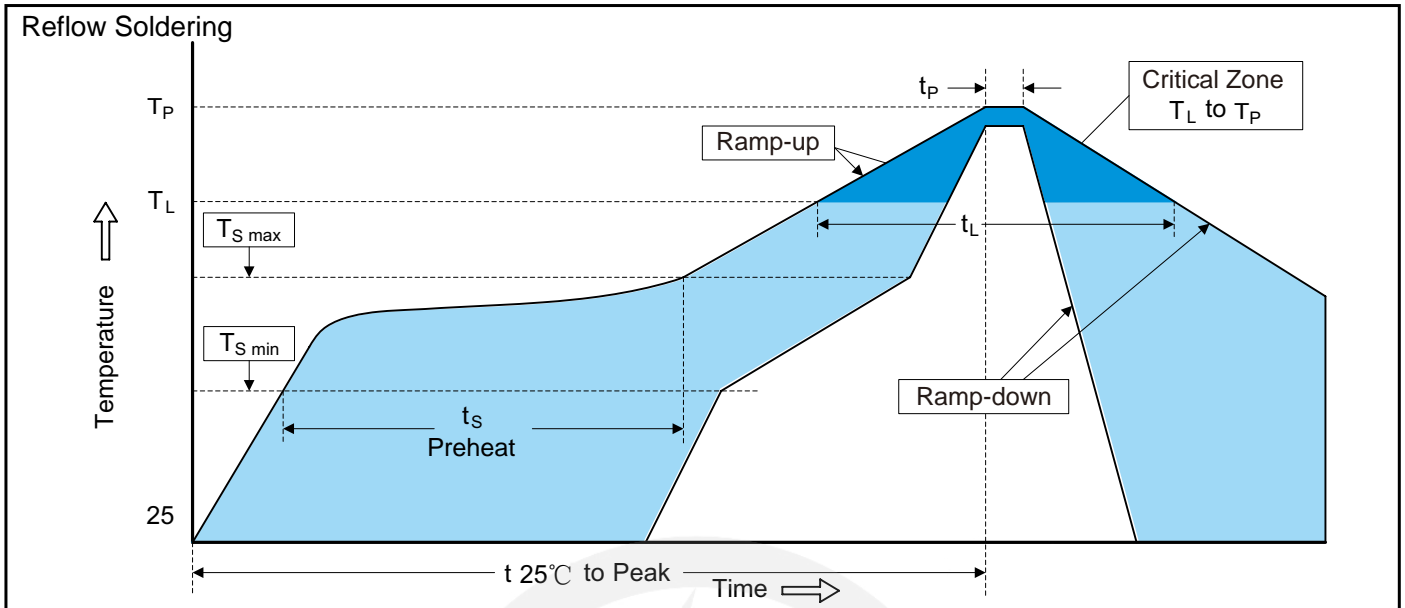
<p>7" Reel</p> 	D2	$\Phi 178.0 \pm 2.0$
	D3	$\Phi 50$
	D4	13.0 ± 0.5
	W1	12 ± 0.5
	Quantity: 3000PCS	

Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2025.01.10	2025.01.10	3.0	New File	/	Ding	